UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,967	02/07/2001	Francine J. Prokoski	MIKOS-101	1836

30743 7590 05/04/2005		EXAMINER
WHITHAM, CURTIS & CHRISTOFFERSON, P.C.		NALVEN, ANDREW L
11491 SUNSET HILLS ROAD		
SUITE 340	ART UNIT	PAPER NUMBER
RESTON, VA 20190	2134	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
	09/778,967	PROKOSKI, FRANCINE J.
Office Action Summary	Examiner	Art Unit	
	Andrew L. Nalven	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 April 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-34</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-34</u> is/are rejected.

7)☒ Claim(s) <u>2</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>18 April 2004</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-34 are pending.

Drawings

2.   This application has been filed with informal drawings which are acceptable for

examination purposes only. Formal drawings will be required when the application is

allowed.

Response to Arguments

3.   Applicant's arguments with respect to the "Sensor ID" feature have been

considered but are moot in view of the new ground(s) of rejection.

4.   Applicant's arguments with respect to the "means for comparing" have been fully

considered but they are not persuasive.

5.   Applicant argues on page 20 that the Murphy reference fails to teach "means for

comparing said transferred Composite Array to said Encoded Data Array, said

comparing means thereby being able to determine whether said Encoded Data Array is

embedded in said Composite Array." Specifically, Applicant alleges that Murphy fails to

teach a comparison of the encoded position information, but instead teaches a

comparison using extracted and recovered information in the clear. Examiner

respectfully disagrees. Murphy teaches comparing said transferred Composite Array to

said Encoded Data Array (Murphy, column 15 lines 36-40, comparing composition array

in the form of position information in the frame with encoded data array in the form of

position information on file elsewhere) to determine whether said Encoded Data Array is

embedded in said Composite Array (Murphy, column 15 lines 40-42). Further, in

response to Applicant's allegation that Murphy fails to teach that the comparison is

based upon the encoded information, Examiner notes that Murphy's comparison step is

between position data encoded with a digital picture and digitally encoded position data

stored elsewhere. Data stored digitally is a form of encoding and thus Murphy does in

fact teach a comparison between an Encoded Data Array (digitally stored position

information) and a Composite Array (digital picture frame with embedded position

information).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1, 4-5, 8-9, 12-14, 18-21, 28 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Murphy et al US Patent No. 5,799,082 in view of Barton US

Patent No. 5,646,977 and Safai US Patent No. 6,642,956.

7.   With regards to claims 1, 4, and 20-24, Murphy teaches an image acquisition

device for producing an original array of two-dimensional digital information (Murphy,

column 14 lines 14-27), means for obtaining current date and time information from

satellite or radio broadcasts (Murphy, column 10 lines 1-9), means for obtaining current

location information from satellite or radio broadcasts (Murphy, column 10 lines 1-9), an

encoder for converting date/time, location, into a two-dimensional format called the

encoded data array (Murphy, column 13 lines 30-37, position information), an embedder

for combining the Encoded Data Array and the Original Array into a new Composite

Array (Murphy, column 11 lines 36-39, embedding position information into image), a

transmission process to transfer the Encrypted Composite Array to the intended

recipient (Murphy, column 15 lines 19-30), means for comparing said transferred

Composite Array to said Encoded Data Array, said comparing means thereby being

able to determine whether said Encoded Data Array is embedded in said Composite

Array (Murphy, column 15 lines 31-47), and an encoding extractor for removing the

encoded data array from the composite array (Murphy, column 15 lines 31-47,

determining the pattern P of pixels). Murphy fails to teach the identifying of a sensor ID,

restoring the original array, and determining changes between the restored array and

original array. Safai teaches means for identifying a Sensor ID for the image acquisition

device (Safai, column 15 lines 36-50, camera serial number). Barton teaches means for

restoring the Original Array at pixel locations used for the encoding (Barton, column 8

lines 1-7, "returns data block to original form"), and means for determining changes

between the restored array and the original array (Barton, column 8 lines 8-9, "Error

Correction Code"). At the time the invention was made, it would have been obvious to a

person of ordinary skill in the art to utilize Safai's sensor ID method with Barton's

methods of using a Sensor ID and restoring and determining changes with Murphy's

system for secure authentication of images because they offer the advantage of

allowing an image to be verified and uniquely ascribed to a particular camera (Safai,

column 15 lines 36-50) and ensuring that a creator or source of an object is known and

verifiable (Barton, column 1 lines 56-60) and ensuring that any errors made dare

corrected (Barton, column 8 lines 8-9).

8.   With regards to claim 5 (as dependent from claim 1), Murphy as modified

teaches the use of the GPS system (Murphy, column 10 lines 1-5).

9.   With regards to claim 8 (as dependent from claim 1), Murphy as modified

teaches the Sensor ID including the serial number and odometer setting of the image

acquisition device (Barton, column 6 lines 51-60, "creator of block" and "block sequence

number").

10.   With regards to claim 9 (as dependent from claim 1), Murphy as modified

teaches the change detector evaluating subsections of the restored original array and

the original array to localize areas of difference (Barton, column 8 lines 8-9).

11.   With regards to claims 12 (as dependent from claim 1) and 28-31, Murphy as

modified teaches everything described above and further teaches the

date/time/location, and source being annotated onto the Encrypted Composite Array

(Barton, column 7 lines 51-60, Murphy, column 13 lines 30-37, column 11 lines 36-39).

12.   With regards to claim 13 (as dependent from claim 1), Murphy as modified

teaches the encoded data providing the key to encryption and decryption algorithms

(Murphy, column 13 lines 38-42, Barton, column 7 lines 21-24).

13.   With regards to claim 14 (as dependent from claim 1 and as best understood),

Murphy as modified teaches the operation of the EIS being triggered by the change of

status of another device (Murphy, column 15 lines 20-47, downloading).

14.   With regards to claim 18 (as dependent from claim 1), Murphy as modified

teaches the encoding being performed by overlaying a pattern of pixels of a particular

color or grey scale value (Murphy, column 11 lines 36-58, authentication pattern).

15.   With regards to claim 19 (as dependent from claim 1), Murphy teaches encoding

being performed using steganography (Murphy, column 11 lines 22-35, position

information into areas unlikely to interfere with visual perception).

16.   Claims 6, 10-11, 25-27, and 32-34 rejected under 35 U.S.C. 103(a) as being

unpatentable over Murphy et al US Patent No. 5,799,082, Barton US Patent No.

5,646,977, and Safai US Patent No. 6,642,956, as applied to claims 1, 21, and 28

above, and further in view of Prokoski US Patent No. 5,583,950.

17.   With regards to claims 6 and 10-11(as dependent from claim 1), 25, and 32,

Murphy as modified fails to teach the decoder using flash correlation to select pixel

locations of the encoded data array to test for authenticity. Prokoski teaches using flash

correlation to select pixel locations of the encoded data array to test for authenticity

(Prokoski, column 11 lines 4-19). At the time the invention was made, it would have

been obvious to a person of ordinary skill in the art to utilize Prokoski's method of flash

correlation with Murphy as modified because it offers the advantage of providing a

robust method to compare of images that accommodates changes in size, warping of

the picture, segmentation, visual noise, and local changes (Prokoski, column 1 lines 16-

26).

18.   With regards to claims 26-27 and 33-34, Murphy as modified teaches the digital

image being a sequence of digital images, there being a unique set of authenticating

information for each digital image in the sequence and a corresponding unique data

array, there being a unique composite array corresponding to each digital image in the

sequence of composite arrays, the target composite array is a sequence of target

composite arrays, and wherein flash correlation determines whether the sequence of

target composite arrays is an authentic copy of the sequence of composite arrays

(Murphy, column 14 line 38 – column 15 line 5, Prokoski, column 11 lines 4-19).

19.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et

al US Patent No. 5,799,082, Barton US Patent No. 5,646,977, and Safai US Patent No.

6,642,956, as applied to claim 1 above, and further in view of Steinberg et al US Patent

No. 5,862,217.

20.   With regards to claim 3 (as dependent from claim 1), Murphy as modified fails to

teach the encryption and decryption step being repeated more than one time. Steinberg

teaches the encryption and decryption step being repeated more than one time

(Steinberg, column 5 lines 5-20). At the time the invention was made, it would have

been obvious to a person of ordinary skill in the art to utilize Steinberg's method of

repeated encryption with Murphy as modified because it offers the advantage of

securing images as part of the image acquisition process thus ensuring that an image is

never stored in an unencrypted format (Steinberg, column 2 lines 19-23).

21.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et

al US Patent No. 5,799,082, Barton US Patent No. 5,646,977, and Safai US Patent No.

6,642,956, as applied to claim 1 above, and further in view of Rhoads US Patent No.

5,841,886.

22.   With regards to claim 7 (as dependent from claim 1), Murphy as modified fails to

teach the Sensor ID including a biometric identifier of the user of the camera. Rhoads

teaches teach the Sensor ID including a biometric identifier of the user of the camera

(Rhoads, column 7 line 65 column 8 line 5). At the time the invention was made, it

would have been obvious to a person of ordinary skill in the art to utilize Rhoads'

method of embedding biometric data in images with Murphy as modified because it

offers the advantage of providing the ability to compare biometric information in high

security authentication procedures (Rhoads, column 8 lines 1-5).

23.   Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Murphy et al US Patent No. 5,799,082, Barton US Patent No. 5,646,977, and Safai US

Patent No. 6,642,956, as applied to claim 1 above, and further in view of Goldberg US

Patent No. 6,526,158.

24.   With regards to claims 15-17 (as dependent from claim 1), Murphy as modified

fails to teach the triggering device being a face recognition system, speed sensor, or

alarm condition sensor. Goldberg teaches the triggering device being a face recognition

system, speed sensor, or alarm condition sensor (Goldberg, column 12 line 63 – column

13 line 5, column 23 lines 39-62). At the time the invention was made, it would have

been obvious to a person of ordinary skill in the art to utilize Goldberg's triggering

mechanisms with Murphy as modified because it offers the advantage of ensuring that

the desired camera target is in the field of view for image acquisition (Goldberg, column

12 line 63 – column 13 line 5).

Allowable Subject Matter

25.   Claim 2 is objected to as being dependent upon a rejected base claim, but would

be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

26.   The following is a statement of reasons for the indication of allowable subject

matter: The cited prior art fails to specifically teach an original array size being

increased by a factor and subpixels being used for the steps of embedding, encrypting,

decrypting, and restoring and thus fails to anticipate or render the claim obvious.

Conclusion

27.   The prior art made of record and not relied upon is considered pertinent to .

applicant's disclosure.

28.   Schipper et al US Patent No. 5,764,770 teaches a system for image

authentication patterning.

29.   Schumacher et al US Patent No. 6,269,446 teaches a system for authenticating

images from digital cameras.

30.   Koto et al US Patent No. 6,671,376 teaches a video scramble/descramble

apparatus.

31.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Andrew L. Nalven whose telephone number is 571 272

3839. The examiner can normally be reached on Monday - Thursday 8-6, Alternate

Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Gregory Morse can be reached on 571 272 3838. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

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